ABSTRACT OF THE DISCLOSURE

A projection exposure apparatus includes an illumination optical system for illuminating a pattern formed on a first object, with light, a projection optical system for projecting the pattern of the first object, illuminated by the illumination optical system, onto a second object for exposure of the same with the pattern, a main system including the illumination optical system and the projection optical system, and an interferometer for use in measurement of an optical characteristic of the projection optical system and being mounted on the main system.